[6450-01-P]

DEPARTMENT OF ENERGY

Draft Environmental Assessment for the Commercial Disposal of Savannah River Site Contaminated Process Equipment

AGENCY: Office of Environmental Management, Department of Energy.

ACTION: Notice of availability.

SUMMARY: The U.S. Department of Energy (DOE) announces the availability of its *Draft Environmental Assessment for the Commercial Disposal of Savannah River Site Contaminated Process Equipment* (DOE/EA-2154) (Draft Savannah River Site (SRS) Contaminated Process Equipment Environmental Assessment (EA)). The Draft SRS Contaminated Process Equipment EA evaluates the potential impacts from a proposed action to dispose of certain SRS contaminated process equipment at a commercial low-level radioactive waste (LLW) disposal facility outside of South Carolina, licensed by either the Nuclear Regulatory Commission (NRC) or an Agreement State pursuant to NRC's regulations for land disposal of radioactive waste. The proposed disposal of the SRS contaminated process equipment is being analyzed consistent with the Department's interpretation of the statutory term "high-level radioactive waste" (HLW) as defined in the Atomic Energy Act of 1954, as amended (AEA), and Nuclear Waste Policy Act of 1982, as amended (NWPA).

DATES: The 45-day public comment period extends from the date of publication of this notice in the *Federal Register* through **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**, in consideration of the end of calendar year 2021 holidays. DOE will hold an informational webinar on January 11, 2022, at 2 pm ET. See section V, "Public Participation," for further information on the public comment process and the informational webinar.

ADDRESSES: Please direct written comments or questions on the Draft SRS Contaminated Process Equipment EA using one of the following methods:

Email: *SRSequipmentEA@em.doe.gov*. Please submit comments in Microsoft™ Word or PDF file format and avoid the use of encryption.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including postal mail and hand delivery/courier, the Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing COVID-19 pandemic. For this EA, DOE is suspending receipt of public comments via postal mail and hand delivery/courier. If a commenter finds that this change poses an undue hardship, please contact James Joyce at (202) 586-5000 to discuss the need for alternative arrangements.

The Draft SRS Contaminated Process Equipment EA is available at: *https://www.energy.gov/em/downloads/draft-environmental-assessment-commercial-disposal-srs-contaminated-process-equipment.*

FOR FURTHER INFORMATION CONTACT: James Joyce, U.S. Department of Energy, Office of Environmental Management, at *SRSequipmentEA@em.doe.gov* or (202) 586-5000.

SUPPLEMENTARY INFORMATION:

I. Background

SRS occupies approximately 310 square miles primarily in Aiken and Barnwell counties in South Carolina. Over the years, a primary SRS mission has been the production of special radioactive isotopes to support national defense programs, including reprocessing of spent nuclear fuel and target materials. More recently, the SRS mission has emphasized waste management, environmental restoration, and the decontamination and decommissioning of facilities that are no longer needed for SRS's traditional defense activities. SRS generated large quantities of liquid radioactive waste as a result of reprocessing activities associated with its nuclear materials production mission.

The SRS process equipment has been utilized during the on-site storage and treatment of the reprocessing waste, which results in the equipment's contamination. This Draft SRS

Contaminated Process Equipment EA analyzes the potential environmental impacts associated with the commercial disposal of SRS process equipment contaminated with reprocessing waste. Portions of the Tank 28F salt sampling drill string, glass bubblers, and glass pumps are comprised of hazardous components (e.g., lead) or are contaminated with hazardous constituents. Because there are no permitted facilities at SRS for the disposal of mixed LLW, this contaminated process equipment cannot be disposed of on-site.

The Tank 28F salt sampling drill string was used to collect reprocessing waste samples from the waste storage tank in F-Area. The Tank 28F salt sampling drill string consists of steel piping measuring 2.25 inches in outer diameter by 41 feet long, contaminated with reprocessing waste (supernatant) from Tank 28F. Contaminants include a mixture of radionuclides (e.g., cesium-137 and plutonium-238). The Tank 28F drill string is currently stored in a large container in a high-radiation area south of the H-Area Tank Farm until a disposal path can be established.

The glass bubblers are used to increase the efficiency of the SRS Defense Waste Processing Facility (DWPF) melter operations, where high-activity tank waste is vitrified into glass under high temperature. Each glass bubbler is made up of a ¾-inch Inconel pipe, which is inserted into the DWPF melter and through which an inert gas is introduced to increase melter efficiency. During operations, approximately three feet of the lower portion of the bubbler is submerged in the melt pool and becomes contaminated with various radionuclides (e.g., cesium-137 and plutonium-238). The total length of each complete bubbler assembly is between 8.8 feet and 9.4 feet, as there are four design lengths based on the bubbler location in the melter. SRS currently has approximately 60 contaminated bubblers in storage and is expected to generate four contaminated glass bubblers every six months until DWPF operations are completed in the 2034 timeframe. Based on the glass bubbler replacement rate of eight bubblers annually, DOE projects a need to dispose of approximately 172 bubblers by the forecasted end of DWPF operations. The bubblers are currently stored inside the DWPF canyon building.

The glass pumps were previously used to support melter efficiency but have been replaced by the glass bubblers and therefore are no longer generated at SRS. Each glass pump includes a section of Inconel pipe, measuring approximately 3.625 inches in outer diameter; only the lower portion (two feet) of which was in the melt pool and contains contaminated glass. The overall glass pump is about 11 feet long. There are approximately 10 glass pumps in storage at SRS requiring disposal. Similar to the glass bubblers, the glass pumps are currently stored inside the DWPF canyon building.

This Draft SRS Contaminated Process Equipment EA will be the second National Environmental Policy Act (NEPA) analysis proposing to apply the high-level radioactive waste interpretation (HLWI) to a particular waste stream. In August 2020, DOE completed its first NEPA analysis (Commercial Disposal of DWPF Recycle Wastewater Environmental Assessment, DOE/EA-2115) analyzing a proposed application of the HLWI.[1] This was implemented in accordance with the June 10, 2019, *Supplemental Notice Concerning U.S. Department of Energy Interpretation of High-Level Radioactive Waste* (Supplemental Notice), 84 FR 26835, in which DOE provided its interpretation of the statutory term HLW as defined in the AEA[2] and NWPA.[3]

In early 2021, various stakeholders submitted both supportive and non-supportive letters to the Secretary of Energy regarding the HLWI. The Secretary is committed to implementing the Department's environmental cleanup programs in a manner that is consistent with the law and that makes evidence-based decisions guided by the best available science and data. The Department assessed the HLWI in light of this commitment; please see separate *Federal Register* Notice, *Assessment of Department of Energy's Interpretation of the Definition of High-Level Radioactive Waste*, which is being published in the *Federal Register* concurrently with this

[1] NEPA documents and technical documents for the commercial disposal of DWPF recycle wastewater from SRS under the HLWI can be found at: *https://www.energy.gov/em/program-scope/high-level-radioactive-waste-hlw-interpretation*.
[2] 42 U.S.C. 2011 *et seq*.
[3] 42 U.S.C. 10101 *et seq*.

notice, documenting the Department's assessment and affirming the Department's interpretation of the statutory term "high-level radioactive waste" as defined in the AEA and the NWPA.

II. Purpose and Need for Action

There is no current disposal pathway for the SRS contaminated process equipment. The purpose and need for DOE's action is to identify a disposal pathway for the SRS contaminated process equipment to mitigate on-site storage constraints, improve worker safety, and support accelerated completion of the environmental cleanup mission at SRS.

III. Proposed Action and Alternatives

Under the proposed action, DOE would dispose of the SRS contaminated process equipment (Tank 28F salt sampling drill string, glass bubblers, and glass pumps) at a commercial LLW disposal facility outside of South Carolina licensed by either the NRC or an Agreement State under 10 CFR part 61. Prior to a disposal decision, DOE would characterize the contaminated process equipment to verify with the licensed offsite commercial LLW disposal facility whether the waste meets DOE's HLWI Criterion 1 for disposal as non-HLW, in accordance with DOE Manual 435.1-1, *Radioactive Waste Management Manual*. DOE would demonstrate compliance with the waste acceptance criteria and all other requirements of the disposal facility, including any applicable regulatory requirements for management of the waste prior to disposal and applicable U.S. Department of Transportation and NRC requirements for packaging and transportation from SRS to the commercial disposal facility. DOE has identified two reasonable action alternatives for the proposed action:

- *Alternative 1* – If determined to be Class B or Class C LLW,[4] DOE would stabilize and package the waste at SRS and ship the waste packages to Waste Control Specialists LLC (WCS) in Andrews County, Texas, for disposal.[5] Implementation would be dependent

[4] In its 10 CFR part 61 regulations, NRC has identified classes of LLW—Class A, B, or C—for which near-surface disposal is safe for public health and the environment. This waste classification regime is based on the concentration levels of a combination of specified short-lived and long-lived radionuclides in a waste stream, with Class C LLW having the highest concentration levels.

[5] Because the SRS contaminated process equipment would most likely result in Class B or Class C LLW, this has been identified as the first alternative.

upon the waste meeting the facility's waste acceptance criteria, among other requirements.

- *Alternative 2* – If determined to be Class A LLW, DOE would stabilize and package the waste at SRS and ship the waste packages to either Energy*Solutions*[6] in Clive, Utah, or WCS in Andrews County, Texas, for disposal. Implementation would be dependent upon the waste meeting the facility's waste acceptance criteria, among other requirements.

The EA also evaluates a No-Action Alternative under which the contaminated process equipment would remain in storage at SRS until another disposal path was identified.

IV. NEPA Process

Comments on the Draft SRS Contaminated Process Equipment EA received during the public comment period will be considered during preparation of the Final SRS Contaminated Process Equipment EA. Following the public comment period—and based on the Final SRS Contaminated Process Equipment EA and consideration of all comments received—DOE will either issue a Finding of No Significant Impact (FONSI) or announce its intent to prepare an environmental impact statement (EIS). If DOE determines that a FONSI is appropriate, both the Final EA and FONSI will be made available to the public. If DOE determines that an EIS is needed, either during preparation of the Final SRS Contaminated Process Equipment EA or after completing the EA, DOE would issue in the *Federal Register* a Notice of Intent to prepare an EIS.

Consultations with other agencies (e.g., State Historic Preservation Officer, U.S. Fish and Wildlife Service) were not required or undertaken in connection with the Draft SRS Contaminated Process Equipment EA because the Proposed Action would not impact cultural resources, historic properties, or threatened or endangered species. The following regulatory agencies were notified of the preparation of this Draft SRS Contaminated Process Equipment

[6] Energy*Solutions* is currently licensed to only dispose of Class A LLW and mixed LLW; WCS is licensed to dispose of Class A, Class B, and Class C LLW and mixed LLW.

EA: U.S. Environmental Protection Agency; NRC; Idaho Department of Environmental Quality; Nevada Division of Environmental Protection; New York State Energy Research and Development Authority; South Carolina Department of Health and Environmental Control; Texas Commission on Environmental Quality; Utah Department of Environmental Quality; and Washington State Department of Ecology.

V. Public Participation

Submission of Public Comments: DOE will accept comments on the Draft SRS Contaminated Process Equipment EA no later than the date provided in the **DATES** section at the beginning of this notice. Interested parties may submit comments using any of the methods described in the **ADDRESSES** section at the beginning of this notice. Because your comments will be made public, you are solely responsible for ensuring that your comments do not include any Confidential Business Information that you or a third party may not wish to be posted.

Confidential Business Information. Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: one copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked non-confidential with the information believed to be confidential deleted. It is DOE's policy that all comments will be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

Informational Webinar: The time and date of the webinar are listed in the **DATES** section at the beginning of this notice. This webinar, which will provide an overview of the Draft SRS Contaminated Process Equipment EA, can be accessed at:

https://doe.webex.com/doe/j.php?MTID=m60ab8e647f04ce33ab25e3cf7e5b60ea

No registration is required. Participants are responsible for ensuring their systems are compatible with the webinar software.

Signing Authority

This document of the Department of Energy was signed on December 15, 2021, by John A. Mullis II, Acting Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs, Office of Environmental Management, pursuant to delegated authority from the Secretary of Energy. This document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the *Federal Register*, the undersigned DOE *Federal Register* Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed at Washington, DC on December 16, 2021.

Treena V. Garrett,
Federal Register Liaison Officer,
U.S. Department of Energy.

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